# INDEX.

☞ It will be observed that, by an error in paging, 49 to 64 are twice numbered. Those marked * come after page 64.

By this error, the full number of pages do not appear, as there are actually 400 pages, or 16 extra, in this volume, beside the Index.


A.

Acid, Prussic, for killing whales, page 32—Carbonic, new method of applying as manure, 206
American Cement, or Artificial Stone, 323
Animals, cruelty to, 58—Digestive apparatus of, 118
Anchor for Carriages on Railroad inclined planes, 49*—Lieut. Rogers' improvement in, for ships, 100
Apprentices, importance of their studying Grammar, 59*—Advice to, 197—Obligation and duty of, to his Master, 320
Address to the Mechanics of Easton, Pa., 193—To Young Men, 355
Arithmetic, Mechanical, 314
Architecture, Nicholson's Treatise on, 322
Aplanatic Engiscope, 222
Abrasion, Comparative Strength with which various Substances resist, 337
Alloys, Solders and Amalgams used in the Arts, 337
Alloys for Iron and Copper, on the practicability of, 337
Agriculturalists, to, 380

B.

Bridge, Freyburg suspension, description of, 12—Mendi, 12—Suspension, 21—Description of Col. Long's 361—Lieut. G. W. Long's, 362—Hopkins' cast-iron draw, for Canals, 363—Suspension over East River, 364
Burden, Henry, 57
Boats, on Canals, resistance of water to, 82—Light iron passage, specification for, 94—Carpenters' and Joiners' work, specification for, 95—A new mode for, 197
Brick Machine, Grimes' Patent, 138—Press do., 139
Bronze, various modes of Imitating, 140
Button Machine, 185
Blow Pipe, Practices of, 272
Breakwater, Portland, 289
Balloon, Communication between London and Paris, 295
Bush, or Spindle Box for Mills, 316

C.

Coloring, on, 17—Silk, Cotton, &c. 73—Other Colors, 74, 75
Canals, Sandy and Beaver, and Mahoning, 22—Substitute for Locks, 81—Navigation of, by J. McNeil, 82
Carriages, Anchor for inclined planes, 49*—Safety apparatus for, 50*
Cordage, Lang's patent, 118
Chimneys, Anti's improved, 135
Cabriolet, new Description of, 136
Circulating Medium, 145—Circulation rapidity, 146—Effect on circulation, 146—Effect of money pressure on the amount of circulation, 147—Combined effect of the causes, 157—Effect on, by the importation of precious metals, the restoration of confidence, 148
Cradle Scythe, improved mode of mounting, 69
Cultivator, Bement's improved, expanding triangular, 70
Civilization, 188
Canals, superiority of large over small, 190—Delaware and Raritan, 190
Copper, refined and unrifined, on the fusion and appearance of, 216—Practicability of alloying with iron, 339
Coals in a crude state worked with hot air, 230, 231, which require to be coked
Checks and balances, 240
Comets, contact of, 245
Cement, new Metallic, 287
Carriages, a dissertation on the running gears of, 296
City affairs, 307
Compass, Trautwine's Beam, description of, 315
Cements, Calcareous, essays on, 337
Cars, Brake for Railroad, 344
Cincinnatus, Lucius Quintius, 355
Coal, fields of, Pennsylvania, 358—In Ohio, 360

D.

Drunkard, confessions of, 107
Distances, measuring of, 120
Diving Dress, description of, 279
Dort, City of, preserved by Milkmaids, 354
Drawing and Working the Five Orders of Architecture, the Student's Instructor in. 322

E.

Engine, Locomotive, 6—Avery's rotary, 126—Marine steam, extracts from evidence in relation to, before the House of Lords, 201—Improved steam, Noble's, 276—Rev. W. Morris' improved, 276—Tilley's new Metallic fire, 287
Engineers, School for Civil, 25—Queries for, 367
Education, mistakes in, 115—Female, 235, 355
Electricity, 352

F.

Fortification, modern, 26
Furnaces, in general, 32, 160, 338
Fire bars for Locomotive Engines, improvement on, 38
Forge, Silversmith's portable, 56
Franklin, so was, 116—Bequest of, to Boston and Philadelphia, 117—Letter of to Dr. Mather, 137—Letter to, by a Seaman, 244
Forges, West's Improvement on, 331
Farmers and Mechanics, 273
Fair of the Mechanics' Institute, 249
Food for Domestic Animals, best mode of cooking, 310
Father to a Son, Letters from, 319, 355
Fire, mode of making at Alkanwick Castle, 854
Flowers, influence of, 357
Fluids, Resistance of, 367

G.

Green, General Nathaniel, Biography of, 49
Gaming, fatal effects of, 51
Grammar, importance of to Young Men, 59*
Gold, 108
Glass, blowing, improvement in, 125
Geer Wheels, to set out the index for cutting the teeth of, 191
Gentleman, who is a, 280
Gas, Hydroclorate, Muriatic Acid, on the effects of at a high temperature, 283
Gun with revolving Breech, 315
Grease for Axles and other Machinery, 368
Goods, New Dress, or finish for certain, 369

H.
Heat and Steam, Clute's improved process of Generating, 1
Heat, absorbing and radiating qualities of different surfaces, 76, 229—Source of Animal, 248
Hot Air, for melting Iron, 39, 240
Hydrometer, a new, 133
Hyena, Laughing, 230
Hogs, Improved China, 309
Horn, method of working, 353

I.
India Rubber, application to Ships' sails, 4, 106
Intemperance, effects of, 50
Iron, Works, Speedwell, N. J., 56*—Malleable, 61—For Railways, trasnverse strength of, 64*, 168—Ore, Smelting with Anthracite Coal, 144—Figure showing the greatest resistance, 176—Preservation of from rust, Experiments in India, 213—Quality of, when made with hot air blast, 232—Concretions on, produced artificially, 243—And Copper, practicability of alloying, 339—Rails, liability to scale and flake, and cohesion of, 366
Institute, Fair of the Mechanics', 71—do. of the American, 72—Franklin, 247—Fair of the Mechanics', 249—Machinery, Models, Philosophical Apparatas and Instruments, 280—Chemicals, 253—Boots, Shoes, Lasts, and Leather, 254—Hats, Caps, and Furs, and Gold and Silver articles, 256—Cutlery, Hardware, Edge Tools, and Musical Instruments, 257—Printing, Book-binding, and Fine and Ornamental Arts, 258—Miscellaneous, 260—Stoves and Apprentices' Work, 263—Institute, American, Labor-saving Inventions and Improvements, 265—Manufactures, 270—Fair of the American, 265
Influences, pernicious, 179
Iron, Copper and Zinc, comparative corrosion of, 191
If I was he, 320
Indigo, substitute for, 341
Interesting Experiment, 336

K
Knowledge for the people, 58

L.
Light, in Water, Experiments to produce, 11—On, 192—Penetrability of electric, 352
Living Beings, Number of, 60*
Lightning, Effects of, 63*
Lead, 110
Levelling, Method of, 114
Liquids, Resistance of, to Solid Bodies moving in them, 151
Labor, on the evil effects of the Division of, 220
Libraries, Apprentices', 349
Lectures, Mechanical, for Apprentices, 351
Letters from a Father to a Son, 355
Lowell, Mass.—Its Manufactories, &c, 329

M
Machine, Smith's Stone Planing, 121—For making Buttons, 185—Hamilton's Sawing, 14—For making Horse Shoes, 57—Shop of Messrs. Reynolds, Kinderhook, 51*—Silk Throwing, of John Lombe, 53*
Milk, Mode of preserving, 14
Meterological Facts, 48, 184, 248
Mechanical Improvements, 187
Marble, Elastic, 64
Mobility, 104
Mineral Kingdom, 108
Metal, Method of obtaining from the Ore, 112
Menshikoff, Alexander, 117
Mechanical Address at Easton, Pa., 193
Manufactures exhibited at the Fair of the American Institute, 270
Meteoric Display, Letters in reply to a Circular, 281
Mill Bush, or Spindle Box, 316
Men, Young, a brief Address to, 355

N.
Nails, Tacks, and Spikes, Grimes' Plan for making wrought, 209, do., 211
Nicholson's Treatise on Architecture, 322
Novelty Works, 187

O.
Oysters, locomotive Power of, 239

P.
Paper Hangings, De La Rue's Improvement in Manufacturing Embossed, 332
People, knowledge for, 58
Power, steam, Amount of, 53*
Painting, Calico, 75
Premium, of $500, 133
Price, cause and effect of Fluctuation, 145—Effect on, by foreign demand for some of our Agricultural Productions, 150—Summary of the Causes of present, 152
Prospects, 152
Problem, 184
Petrolium of Rangoon, chemical examination of, 214
Panther, Domesticated, 240
Plans for Buildings, objections to the custom of offering Premiums for, 246
Perspective Delineator, 277
Patterson, John, A. M., 347
Printing, Art of, 349
Philadelphia, Visit to, by A. W. 376

R.
Railway, Bars for, best form of, 7—Pneumatic, 8, 97—Hydrodynamic, 44—Locks, instead of Inclined Planes on, 80—In relation to, 97—Foot, 153—Curves, on the Location of, 155, 372—Turnouts, with flexible malleable Rails, 180—Bars, angular, 208—Transit, Cheap Mode of, 209—Rails and Pedestals, Daglish's Prize, 223—Carriages, adhesion of the Wheels to the Rail, 297—Means of changing direction of and adhesion of the Cone, 298—Ill effects produced by the Cone, 299—Use of large Wheels, bad tendency of loose do., and inclination of loose ones together, 300—Vibrating Axles, bad tendency of, 301—Long Levels and Steep Grades on, or an examination of Engines before the House of Lords, in relation to, 344—Mode of constructing on Poles, 365—Bars, 367—Bristol and Gloucestershire, account of, 370—Liverpool and Manchester, 370—Steep Grades for, 333
Rails, transverse, Strength of, 64, 168—Curvature of, and Resistance of the fish bellied, 65—Liability to scale and flake, 366—Sections of, used in the United States, 334
Reason and the Affections, 54
Revolving Platform, Description of, 306

S.
Steam Engine, Stillman's Improved Safety Valve for, 2—In Glasgow, 124
Ships, Glass as Sheathing for bottoms, 5
Steamboats, Aerial, 5—Improved Draft for the hull, 134—Lexington, the Fastest in the World, 318
Science, Book of, for Young People, 52, 103—In Russia, 228
Schools, Natural Science in, 61—Manual Labor, 238
Sermon, a short one, 64
Silk Throwing Machine of John Lombe, 53*
Spikes, Burden's Railroad, 57
Societies, Apprentices,' 59*
Stove, the Bruges, 61*
Stereotype, Substitutes for, 62*
Street Signs, Illuminated, 335
Success, How to insure, 64*
Spark Catcher, Young's Locomotive Engine, 68
Salt of Cabul, 107
Stone Dressing Machine, Smith's, 121
Speculations, what is to check, 149—Do they, and the Fluctuations depend on Banks? 149
Slaves, Value of, influenced by the Price of Cotton, 150
Shooting Stars, 229
Silk and Worsted, 326
Snake, Hoop, 234—Of Africa, 235
Sand Capes, 239
Streets and Roads, in England and Wales, 273—Carriage Tracks in, of Stone, 306
Submarine Operations, 277
Sheathing, Paten' Bronze, 293
Solders, Alloys, and Amalgams, used in the Arts, 337
Sarcophagus, Cretan, 351
Steam Carriages on Common Roads, 371
Stephenson, R. & G., and Vignoles, Examination of, in relation to Short Grades and Long Levels on Railroads, 344

T.
Terms, Explanation of, 336
Trees, Felling by Machinery, 15
Temperance Anecdote, 106
Tides in the South Sea, 229
Telephony, or Musical Tellegraph, 290

Timber, Preservation of, by Kyan's Patent for preventing Dry Rot, 292
Threshing Machine, Marshall's Improved, 316
Tomato, the, 358
Tables of Discounts, 370

V.

Volcano of Popocatepetl, 229
Volumescope, 230
Vessels, propelling of by the retroactive force of a column of Air, 278

W.

Well Sweep, to find length of, 47
West's Improvement on Forges, 331
Warp, Cotton, 58
Whales, hydrostatic pressure on the eyes of, 62*
Wheels, Adams' Circular Spring, 129—Hydraulic Blast, 218—For Carriages, improvement in, 274
Warming and Ventillating Process, 136
Water Pipes, on the obstruction of Cast-iron, 241
Woollens, to Dye, 295
Whitewash, durable, 320
Water Works, to supply the City of New-York, 883

ENGRAVINGS—
Heat and Steam Generator, P. I. Clute, 1—T. B. Stillman's Improved Safety Valve, 2—Railway Bar, form of, 8—Hamilton's Sawing, 15—Modern Fortification, 29—Hot Air Furnaces for melting Iron, 40, 41, 42—Well Stoops, 47—Speedwell Iron Works, 49*—Carriage Anchor for Inclined Planes, 49*—Malleable Iron, to try the strength of, 67—Cultivator, Bement's, 70—Iron Canal Boats, 84, 87—Pneumatic Railway, 98—Stone dressing Machine, 121—Glass Blowing, 125—Avery's Rotary Engine, 127—Steamboat Hull of improved draft, 134—Furnace for Anthracite Coal, 144—To show the extension of Malleable Iron under different degrees of tension, 169—Button Machine, 135—Apparatus for applying Carbonic Acid Gas as manure, 207—Railway Bars, angular, 208—Blow Pipe, 273—Carriage Wheels, 275—Noble's Improved Steam Engine, 277—Perspective Delineator, 277—Fire Engine, Tilley's new Metallic, 288—Apparatus for cooking food for Domestic Animals 311, 312—Trautwine's Beam Compass, 313—Building constructed of Parker's Cement, 325—West's Improvement on Forges, 331—De La Rue's Embossed Paper Hangings, 332—Sections of Rails, 334—Col. Long's Plan of Bridge Building, 361—Hopkins' Cast and Wrought Iron Draw Bridge, 374